

What is claimed is:

1. In a minesweeper having a two-sided frame adapted to be coupled to and pushed by a tractor and a rake pivoted from each side of the frame by respective pairs of coupling bars of different lengths so that as the rake moves away from the frame to bury itself in the soil, the coupling bars rotate it to a less aggressive digging angle that prevents the rake from stalling the tractor,

means connected to the frame for catching and sifting mines, soil, rocks and other objects buried in the soil passing over the rake without small amounts of vegetation and variances in soil conditions clogging the catching and sifting means.

2. The minesweeper recited in claim 1 in combination with a tractor.

3. The minesweeper recited in claim 1 wherein the catching and sifting means includes:

a plurality of spaced fixed vanes, wherein the frame has a top and a bottom and the vanes run across the bottom of the frame from one side of the frame to the other side.

4. The minesweeper recited in claim 3 wherein the catching and sifting means includes:

two pairs of rollers, one pair of rollers mounted on the one side of the frame and the other pair of rollers mounted on the other side of the frame.

5. The minesweeper recited in claim 4 wherein the catching and sifting means includes:

a pair of endless chains running across the top of the frame and around the rollers.

6. The minesweeper recited in claim 5 wherein the catching and sifting means includes:

a plurality of spaced beams carried by the pair of chains, the beams lying across the spaced fixed vanes.

7. The minesweeper recited in claim 6 wherein the catching and sifting means includes:

a plurality of teeth mounted on the beams.

8. The minesweeper recited in claim 7 wherein the catching and sifting means includes:

means for turning the rollers to move the chains around a loop so the teeth mounted on the beams rake sideways along the vanes any mines, soil, rocks and other objects buried in the soil passing over the rake and caught by the vanes, the teeth partially meshing with the vanes and forcing the soil to fall through while mines, and other objects larger than the vane spacing are carried along the tops of the vanes and are ejected to the side of the frame.

9. In a minesweeper having a two-sided frame with a top and a bottom and adapted to be coupled to and pushed by a tractor, and a rake pivoted from each side of the frame by respective pairs of coupling bars of different lengths so that as the rake moves away from the frame to bury itself in the soil, the coupling bars rotate it to a less aggressive digging angle that prevents the rake from stalling the tractor:

a plurality of spaced fixed vanes, wherein the frame has a top and a bottom and the vanes run across the bottom of the frame from one side of the frame to the other side;

two pairs of rollers, one pair of rollers mounted on the one side of the frame and the other pair of rollers mounted on the other side of the frame;

a pair of endless chains running across the top of the frame and around the rollers,

a plurality of spaced beams carried by the pair of chains, the beams lying across the spaced fixed vanes;

a plurality of teeth mounted on the beams; and,

a motor coupled to the rollers for turning the rollers to move the chains around a loop so the teeth mounted on the beams rake sideways along the vanes any mines, soil, rocks and other objects buried in the soil passing over the rake and caught by the vanes, the teeth partially meshing with the vanes and forcing the soil to fall through while mines, and other objects larger than the vane spacing are carried along the tops of the vanes and are ejected to the side of the frame.

10. The minesweeper recited in claim 9 in combination with the tractor.

11. In a method of sweeping mines including the steps of pushing a two-sided frame and pivoting a rake from each side of the frame by respective pairs of coupling bars of different lengths so that as the rake moves away from the frame to bury itself in the soil, the coupling bars rotate it to a less aggressive digging angle,

the step of catching and sifting mines, soil, rocks and other objects buried in the soil passing over the rake without small amounts of vegetation and variances in soil conditions clogging the catching and sifting means.

12. The method of claim 11 wherein the catching and sifting step includes:

running a plurality of spaced fixed vanes across the bottom of the frame from one side of the frame to the other side.

13. The method of claim 12 wherein the catching and sifting step includes:

mounting one pair of rollers on one side of the frame.

14. The method of claim 13 wherein the catching and sifting step includes:

mounting another pair of rollers on the other side of the frame.

15. The method of claim 14 wherein the catching and sifting step includes:

running an endless chain across the top of the frame and around the rollers.

16. The method of claim 14 wherein the catching and sifting step includes:

running another endless chain across the top of the frame and around the rollers.

17. The method of claim 16 wherein the catching and sifting step includes:
supporting a plurality of spaced beams on the pair of chains, the beams lying across the spaced fixed vanes.
18. The method of claim 17 wherein the catching and sifting step includes:
mounting a plurality of teeth on the beams.
19. The method of claim 18 wherein the catching and sifting step includes:
turning the rollers to move the chains around a loop so the teeth mounted on the beams rake sideways along the vanes any mines, soil, rocks and other objects buried in the soil passing over the rake and caught by the vanes, the teeth partially meshing with the vanes and forcing the soil to fall through while mines, and other objects larger than the vane spacing are carried along the tops of the vanes and are ejected to the side of the frame.
20. The method of claim 19 wherein the frame is pushed by a tractor.